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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,929

03/31/2004

Hisashi Kayukawa

600791-6US

7489

(ZUS03-022TAE)

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7590

07/20/2006

AKIN GUMP STRAUSS HAUER & FELD L.L.P.  
ONE COMMERCE SQUARE  
2005 MARKET STREET, SUITE 2200  
PHILADELPHIA, PA 19103

EXAMINER

RIVELL, JOHN A

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/813,929

Applicant(s)

KAYUKAWA, HISASHI

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/31/04 (application).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11 and 14-27 is/are rejected.
- 7) ☒ Claim(s) 9, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03312004, 12102004</u> . | 6) <input type="checkbox"/> Other: _____  |

Claims 1-27 are pending.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 4, 5, 6, 7, 8, 16, 17, 22, 23 and 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 4, 5, 6, 7, 22, 23, 30, 31 and 39, respectively, of copending Application No. 10/814,901 in view of Overlander.

The device of each respective copending application claim includes all the instantly claimed features with the exception of including the material of the core body "having a hardness differing from a hardness of the inner wall of the throughbore" and the material of the shaft "having a hardness differing from a hardness of the core body" and an "abutting taper" on the valve head mating with the valve seat.

The patent to Overlander discloses that it is known in the art to employ a brass material sleeve element at sleeve B of figure 6, mounting the check valve unit within its assembled position inside a steel mounting, the brass material being for the purpose of ensuring rustproof joints at the contact of the brass material with steel as brass does not rust and so that the valve seat formed by the brass material eventually grinds down as brass is softer than the remaining steel parts, thereby ensuring a smooth valve seat. Additionally, the device of Overlander includes an "abutting taper" at the head and seat contact surfaces of valve head 8a, and valve seat 8 of fig. 2, for the purpose of providing a larger seating area for the valve.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the respective devices of each respective copending application claim a brass metal sleeve as the core element for the purpose of ensuring rustproof joints at the contact of the brass material with steel as brass does not rust and so that the valve seat formed by the brass material eventually grinds down as brass is softer than the remaining steel parts, thereby ensuring a smooth valve seat and to employ a tapering head and seat mating surface for the purpose of providing a larger seating area for eth head and seat as recognized by Overlander.

This is a provisional obviousness-type double patenting rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer et al. in view of Overlander.

The patent to Steer et al. discloses, in figure 2 for example, a "valve core for opening and closing a core mounting throughbore (within 11a; see assembly of fig. 3), comprising: a cylindrical core body (11) fixed inside the throughbore and made of a (material)... throughbore (of 11a), the core body (11) having a distal opening; a moving shaft (24) inserted through the core body (11) so as to be directly moved and made of a (material appearing as) metal... , the moving shaft (24) having an end; a plug (23) formed integrally at the end side of the moving shaft (24) so as to open and close the distal opening of the core body (11); a biasing member (29) biasing the moving shaft (24) so that the distal opening of the core body (11) is closed by the plug (23); a body positioning abutment (read as the outer surface of core 11) formed on an outer face of the core body so as to abut the inner wall of the throughbore (see assembly of fig. 3), thereby providing a metal seal for a gap between the inner wall of the throughbore and the outer face of the core body (11); and an abutting taper (at numeral 23 of fig. 1) formed on the plug (23) so as to abut an inner edge of the distal opening of the core body (11), thereby providing a metal seal for a gap between the plug (23) and the distal opening of the core body (11)" as recited in claim 1.

Thus the patent to Steer et al. discloses all the claimed features with the exception of having the "metal (of the core body) having a hardness differing from a hardness of an inner wall of the throughbore".

The patent to Overlander discloses that it is known in the art to employ a brass material sleeve element at sleeve B of figure 6, mounting the check valve unit within its assembled position inside a steel mounting, the brass material being for the purpose of ensuring rustproof joints at the contact of the brass material with steel as brass does not

rust and so that the valve seat formed by the brass material eventually grinds down as brass is softer than the remaining steel parts, thereby ensuring a smooth valve seat.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steer et al. a brass material sleeve at core element 11 for the purpose of ensuring rustproof joints at the contact of the brass material with steel as brass does not rust and so that the valve seat formed by the brass material eventually grinds down as brass is softer than the remaining steel parts, thereby ensuring a smooth valve seat as recognized by Overlander.

Regarding claim 19, in Steer et al., "the biasing member (29) comprises a compression coil spring inserted into a portion of the moving shaft (24) protruding outward from the core body (11) so as to be compressed between a spring stopper (31) formed integrally with the end of the moving shaft (24) and the end of the core body (at bridge 15)" as recited.

Regarding claim 26, in Steer et al., "the core body (11), the moving shaft (24) and an elastic member (29) serving as the biasing member are formed into three discrete parts" as recited.

Claims 2, 3, 7, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer et al. in view of Overlander as applied to claims 1, 19 and 26 above, further in view of Richards.

The patent to Steer et al., as modified by Overlander, discloses all the claimed features with the exception of having "a cylindrical sealing member detachably fitted with the core body, the sealing member including an outer sealing portion fitted with the outer periphery of the core body so as to be held between the core body and the inner wall of the throughbore thereby to adhere closely to outer periphery of the core body

and an inner sealing portion provided to adhere closely to an outer face of the plug, the outer and inner sealing portions being formed integrally with the sealing member”.

The patent to Richards discloses that it is known in the art to employ a “cylindrical sealing member (18) detachably fitted (in the embodiment wherein element 18 is stretched over the end of core body 23, see fig. 6) with the core body (23), the sealing member (18) including an outer sealing portion fitted with the outer periphery of the core body (23) so as to be held between the core body (23) and the inner wall of the throughbore (represented at 17) thereby to adhere closely to outer periphery of the core body (23) and an inner sealing portion provided to adhere closely to an outer face of the plug (at 21), the outer and inner sealing portions being formed integrally with the sealing member” for the purpose of sealing the valve body in its assembled location within a throughbore and to seal the fluid path closed by contact between the seal and the valve head by utilizing a single sealing element attached to the lower end of the bore body.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steer et al., as modified by Overlander, a “cylindrical seal” attached to the lower end of the core body 11 for the purpose of sealing the valve body in its assembled location within a throughbore and to seal the fluid path closed by contact between the seal and the valve head by utilizing a single sealing element attached to the lower end of the bore body as recognized by Richards.

Regarding claim 3, in Richards, “the inner sealing portion (of seal element 18) protrudes forward from an end of the core body” as recited.

Regarding claim 7, in Richards, “the cylindrical sealing member (18) is rotatably fitted with the core body” when stretched over the end of core body 23, as recited.

Regarding claims 20 and 21, in Steer et al., “the biasing member (29) comprises a compression coil spring inserted into a portion of the moving shaft (24) protruding

outward from the core body (11) so as to be compressed between a spring stopper (31) formed integrally with the end of the moving shaft (24) and the end of the core body (at bridge 15)" as recited.

Claims 10, 11, 14, 15, 18, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steer et al. in view of Overlander and Richards as applied to claims 2, 3, 7, 20 and 21 above, further in view of Zabel, Jr.

The patent to Steer et al., as modified by Overlander and Richards, discloses all the claimed features with the exception of having "the cylindrical sealing member butted against a stepped portion between a portion of the core body with which the cylindrical sealing member is fitted and the body positioning abutment".

The patent to Zabel, Jr. discloses that it is known in the art to employ a "cylindrical seal" at seal element 13 attached to upper core body 3 by a mortise and tenon type of connection for the purpose of removably attaching the lower seal element to the valve core body.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steer et al., as modified by Overlander and Richards, a mortise and tenon type connection between the lower cylindrical seal element and the valve core body for the purpose of removably attaching the lower seal element to the valve core body as recognized by Zabel, Jr.

Regarding claims 14, 15 and 18, in Zabel, Jr., "the cylindrical sealing member (13) includes a larger diameter portion and a smaller diameter portion both arranged axially, the core body (3) is fitted in the larger diameter portion, and the core body has an end face butted against a stepped portion between the larger and smaller diameter portions" as recited.



Regarding claims 24 and 25, in Steer et al., "the biasing member (29) comprises a compression coil spring inserted into a portion of the moving shaft (24) protruding outward from the core body (11) so as to be compressed between a spring stopper (31) formed integrally with the end of the moving shaft (24) and the end of the core body (at bridge 15)" as recited.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steer et al. in view of Lowrey et al.

The patent to Steer et al. discloses a "valve core for opening and closing a core mounting throughbore, comprising: a cylindrical core body (11) fixed inside the throughbore (see assembly of fig. 3) and having a distal opening; a moving shaft (24) inserted through the core body (11) so as to be directly moved and having an end; a plug (at 23) formed integrally at the end side of the moving shaft (24) so as to open and close the distal opening of the core body (11); a biasing member (29) biasing the moving shaft (24) so that the distal opening of the core body (11) is closed by the plug (23); a body positioning abutment (read on the outer surface of core 11) formed on an outer face of the core body so as to abut the inner wall of the throughbore, thereby providing a metal seal for a gap between the inner wall of the throughbore and the outer face of the core body (11); an abutting taper (at numeral 23) formed on the plug so as to abut an inner edge of the distal opening of the core body (11), thereby providing a metal seal for a gap between the plug and the distal opening of the core body (11)" as recited in claim 27.

Thus the patent to Steer et al. discloses all the claimed features with the exception of having a "a sealing resin coated on the core body so that at least the body positioning abutment and an inner edge of the distal opening of the core body are covered by the resin".

The patent to Lowrey et al. discloses that it is known in the art to employ a resin coating 32 over all internal conduit parts and a similar liner 47 over all the internal valve parts for the purpose of protecting the internal fluid contacting surfaces from the effects of the fluid conducted through the valve device.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Steer et al. a resin coating over and/or all internal fluid contacting parts of the device of Steer et al. for the purpose of protecting the internal fluid contacting surfaces from the effects of the fluid conducted through the valve device as recognized by Lowrey et al.

Claims 9, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant is reminded that a clear line of demarcation must be maintained between applications.

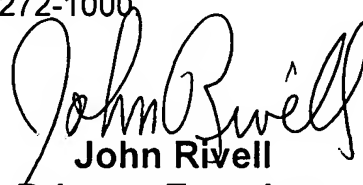
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**John Rivell**  
**Primary Examiner**  
**Art Unit 3753**

j.r.